

Applicant : Allen et al
Serial No. : 10/775,665
Filed : February 9, 2004
Page : 3 of 9

Attorney's Docket No.: 10887-013002

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A ~~transportable~~ system for separating materials in a waste stream, comprising:
an arrangement of separation and grinding devices ~~mounted on a transportable platform~~, the separation and grinding devices being configured in the arrangement to produce three or more product streams from a plastic-rich feed mixture, the product streams including a coarse heavy stream, a ground plastic-rich product stream, and at least one ground light material stream;
wherein the arrangement comprises:
an air separator for separating metal materials from the plastic-rich feed mixture,
a grinder in operable communication with the air separator such that at least a portion of a plastic material exiting the separator enters the grinder,
a second separator in operable communication with the grinder, the second separator being configured to receive a ground material stream from the grinder and to separate at least one ground light material stream from the ground material.
- 2-3. (Canceled)
4. (Currently Amended) The system of claim 3~~1~~, wherein:
the second separator uses air to separate ~~a light fraction~~ the ground light material stream.
5. (Currently Amended) The system of claim 3~~1~~, further comprising:
an auger or feeder configured to receive a product stream from the air separator, the grinder or the second separator.

Applicant : Allen et al.
Serial No. : 10/775,665
Filed : February 9, 2004
Page : 4 of 9

Attorney's Docker No.: 10887-013002

6. (Currently Amended) The system of claim 31, further comprising:
one or more fans configured to push or pull material through the system.

7-8. (Canceled)

9. (Currently Amended) A method of processing a plastic-rich mixture, comprising:
~~delivering to receiving at a waste-goods location a transportable at least a portion of a~~
separation system including an arrangement of separation and grinding devices ~~mounted on a~~
~~transportable platform; and~~

operating the system to process a plastic-rich feed mixture to produce at least three
product streams, the product streams including a coarse heavy stream, a ground plastic-rich
product stream, and at least one ground light material stream, wherein operating the system
comprises feeding the plastic-rich feed mixture into an air separator to separate metal materials
from the plastic-rich feed mixture and forming the coarse heavy stream, followed by grinding at
least a portion of a plastic material exiting the air separator in a grinder to form a ground
material, followed by sending the ground material from the grinder into a second separator to
separate the at least one ground light material stream and the ground plastic-rich product stream
from the ground material; and

~~removing the system from the waste-goods location.~~

10. (Currently Amended) The method of claim 9, wherein:
the devices of the system remain mounted on ~~the~~ a transportable platform throughout the
~~delivering, receiving and~~ operating ~~and removing~~ steps.

11. (Original) The method of claim 9, further comprising:
transporting the ground plastic-rich product stream to a plastic recovery facility.

Applicant : Allen et al.
Serial No. : 10/775,665
Filed : February 9, 2004
Page : 5 of 9

Attorney's Docket No.: 10887-013002

12. (New) The method of claim 9, wherein the receiving step includes receiving the air separator, the grinder and the second separator on a transportable platform.

13. (New) The system of claim 1, wherein the air separator separates the metal materials from the plastic-rich feed mixture by separating heavier or denser materials from lighter or less dense materials.

14. (New) The system of claim 1, wherein the arrangement of separation and grinding devices are mounted on a transportable platform.

15. (New) The system of claim 14, wherein the platform is included in an enclosure housing the arrangement.

16. (New) The system of claim 14, wherein the platform is included in a shipping container, a truck trailer or a railroad car.

17. (New) A method for removing metals from a mixture, comprising:
moving air in an air separation device;
adding a mixture of plastics and metals to the air separation device, wherein the moving air entrains light materials in the mixture and allows heavier components to fall within the separation device;
collecting the heavier components; and
collecting the light materials separately from the heavier components.

18. (New) The method of claim 17, wherein collecting the light materials includes collecting a plastic-enriched product, which has a higher percentage of plastic than the mixture.

Applicant : Allen et al.
Serial No. : 10/775,665
Filed : February 9, 2004
Page : 6 of 9

Attorney's Docket No.: 10887-013002

19. (New) The method of claim 17, wherein collecting the heavier components includes collecting metals.

20. (New) The method of claim 17, wherein moving air includes one of blowing air in an upward direction, creating a suction or causing air to recirculate.